

NOTES ON AUSTRALIAN *RHOPALOCERA:LYCÆNIDÆ*.

## PART I.

BY G. A. WATERHOUSE, B.Sc., B.E., F.E.S.

(Plate xiv.)

It is my intention in this series of papers to publish from time to time notes on the generic position of Australian species referred to the *Lycænidae*, so that our knowledge of this family may be brought more into line with that of other parts of the world, particularly of the Indo-Malayan region. At the present time our genera are large and unwieldy, containing many very dissimilar forms, for which there are suitable genera at hand in which to place them. The system of classification used will be that given by the late Mr. L. de Nicéville in his 'Butterflies of India, Burmah and Ceylon. Part iii. *Lycænidae*,' to whom I am also indebted for many valuable generic notes on Australian specimens which have been submitted to him. In addition to my own collection of Australian and foreign *Lycænidae* I have had access to the very fine collection in the Macleay Museum. In addition I intend giving notes on life-histories, distribution and synonyms, as well as descriptions of any new species it may be my good fortune to discover.

## MEGISBA NIGRA, Miskin.

*Lycæna nigra*, (♀) Misk., Proc. Linn. Soc. N.S. Wales, 1890, v. (2), 36.

Miskin described the female; I now give a description of the male.

♂. Upperside black, with white central areas. *Forewing* with costa almost straight, apex acute (much more so than in ♀), outer margin nearly straight (convex in ♀); three subcostal nervules, first subcostal entirely free from costal nervure, a black costal margin, apex and outer margin, the medial conical white patch extending obliquely from near middle to inner margin; base brown. *Hindwing* coloured as in forewing, except that the central white patch extends from near middle to costa, forming a continuation of the white patch of the forewing.

Underside silvery-white, with light black lunular external margins. *Forewing*, pale black costa and outer margin a pale brown streak at end of cell, and four black costal spots. *Hindwing* with black outer margin, three subbasal spots, an apical and an anal black spot.

The distinction between the sexes is that the apex is more acute, the outer margin of the forewing and the anal angle more pronounced in the male than in the female; otherwise the sexes are similar. This species should correctly be referred to the genus *Megisba*, Moore, of which the type is *M. malaya*, Horsf. The insects of this genus, which probably contains a single very variable species, may be anything from wholly black to white with black margins on the upperside; while on the underside the markings are much more constant, but are usually darker and larger according as the white of the upperside decreases in size. The species is represented by individuals with or without a tail to the hindwing. The expanse in both sexes is about 20 mm. Though convinced that the Australian species is only one of the many forms of the type of the genus, I prefer, however, for the present not to sink Miskin's name; of all the forms which de Nicéville sinks under *M. malaya* ours is closest to *M. albidisca*, Moore.\*

Though the species is one of our *blackest* Lycænids, yet it is the *whitest* form of the genus, and the name *nigra* is rather out of place. *M. malaya* is recorded all through the Indo-Malayan

---

\* Journ. Asiat. Soc. Bengal, Vol. liii. Pt. ii., p. 21, 1884.

region, and the Australian form has been taken at Cardwell (Miskin) and Cairns (R. E. Turner).

#### HOLOCHILA CYPROTUS, Olliff.

*Chrysophanus cyprotus*, Oll., Proc. Linn. Soc. N.S.W. x. 716, 1885; *Holochila cyprotus*, Misk., Syn. Cat. Rhop. Aust. p. 64, 1891; *H. purpurea*, Grose Smith & Kirby, Rhop. Exot. pl. x., figs. 11 & 12 (♂), Pt. 39, p. 7, 1896.

A pair of this species determined by the late Mr. Olliff is in my collection; and on looking through the 'Rhopalocera Exotica' I found an excellent figure of the male under the name of *H. purpurea* from Sydney and Moreton Bay. The localities agree, and also the description and figure; and there is no doubt in my mind that *H. purpurea* is the same insect. The confusion was caused no doubt by *H. cyprotus* being originally placed in the genus *Chrysophanus*, to which it certainly does not belong. This species is very local; and I have found only one brood, and that appeared in Sydney very early in the season, and was on the wing only a short time. The females are much rarer and of slower flight than the males. In Brisbane Mr. R. Illidge has taken larvæ feeding on *Jacksonia* sp., but as I know of no *Jacksonia* nearer to Sydney than Blacktown, there must be some other food-plant.

*Loc.*—Sydney, Como, and Katoomba, N.S.W.; Brisbane and Rockhampton, Q.

#### HOLOCHILA HELENITA, Semper.

Journ. Mus. Godeff. xiv., p. 162, 1879; *Holochila androdus*, Misk., Proc. Linn. Soc. N.S.W. 1890, v. (2), p. 41; *H. subargentea*, Grose Smith & Kirby, Rhop. Exot. *Hol.* i., Pt. 38, figs. 9 & 10 (♂), 1896.

This species for many years has passed under Miskin's name of *androdus*. By all the authors mentioned above, this species is compared with the allied form, *H. absimilis*, Felder. Semper says the male is greenish and shining, with a dark arrow-shaped shadow standing out along the veins in the centre of the forewings;

in the female the white areas are larger than in *absimilis*, and in the hindwing the white area extends to the costa. Thus it will be seen that when describing *H. androdus*, Miskin was only renaming an old species. Miskin does not mention the arrow-shaped shadow on the forewing, but one of his localities, Cape York, is the same as Semper's. Regarding *H. subargentea*, Mr. R. E. Turner, who has seen both the type specimen of *androdus* and the figure of *subargentea*, says that they are identical. The figure is a very good one, and shows the arrow-shaped shadow on the forewing, a character, however, not mentioned in the description. The female is not figured, and the locality given for the male is Cape York.

Mr. Turner, who has caught many specimens of this species both at Cairns and Cape York, informs me that the markings on the underside vary, but that those of the upperside are constant. A careful examination of the descriptions convinces one that both Miskin, and Grose Smith and Kirby described a much older form. It should also be noted that the locality, Cape York, is given by all three writers.

*Loc.*—Cairns, Cooktown, and Cape York, Q.

#### OGYRIS, Westwood.

Gen. Diurn. Lepid. ii., 472 (1850-1852); Miskin, Proc. Linn. Soc. N.S.W. 1890, v. (2), 23.

The three following species of this beautiful Australian genus have, by all writers, been greatly confused. The insects are all of a brilliant silvery-blue on the upperside; and on account of their at one time great rarity they are usually poorly represented in collections. Also authors knowing only one species, have tried to make it fit described species with little success. The difficulty is cleared up, however, when we recognise that there are not *one* or *two* species, as authors have variously supposed, but *three*; and that the commonest and best known is the one that as yet has not been named. I give the three descriptions below.

## OGYRIS ORÆTES, Hewitson.

Cat. Lyc. Brit. Mus. p. 3, t. 1, figs. 12-13 (♀), 1862.

(Plate xiv., figs. 1-2.)

♂. Upperside silvery-blue with a faint black edging; the blue has a slight purplish tint which distinguishes it from the males of the two following species. The apex also is more acute and the outer margin straighter.

Underside grey. *Forewing* with cell crossed by five white transverse bars; the first small basal, between the second and third darker grey, between the fourth and fifth almost black and a dark bar external to cell. The dark discal band *straight*, from costa to first median nervule; a dark submarginal band. *Hindwing* with several irregular brown spots surrounded with darker brown and dark brown submarginal suffusions.

The male may be distinguished from the males of the two following species by the totally different shade of blue, the very small brown margins, the more acute apex to the forewing; and on the underside the discal band is *straight*, nor can I find any trace of blue in the cell as is found in the males of both the other species. The specimen referred to this species by Miskin\* is in reality the male of *O. hewitsoni*.

♀. Upperside. *Forewing* silvery-blue, costal margin brown, widening beyond the cell, apex and outer margin broadly brown, a dark bar at end of cell and costa near apex marked with two white splashes; the apex is acute and outer margin nearly straight as in male. *Hindwing* silvery-blue, with brown outer margin, narrowest at the terminations of the veins, fringes white.

Underside as in male, but the white bars of the cell are often bordered with silvery-blue. This may be distinguished from the females of the two following species by the absence of scarlet in the cell and the straight discal band of the underside. The upperside is almost identical with that of the female of *O.*

---

\* Proc. Linn. Soc. N.S.W. 1890, v. (2), 26.

*hewitsoni*, but has a more acute apex and a straighter outer margin.

Hewitson gives an excellent figure of this sex only. Though Miskin correctly determined a female specimen from Mackay for Mr. R. E. Turner, yet he says that the Australian Museum contained a female. But the specimens of *O. orates* have only been there for about two years; and I have no doubt he mistook a male of *O. amaryllis* for the female of *O. orates*, as he was doubtful of his determination. Mr. F. D. Dodd, of Townsville, has bred some fine examples of this species, from which my descriptions are mainly taken; they, however, do not show the blue in the cell on the underside as shown in Hewitson's figure, but this is the only variation. The *recognition marks* of this species are the acute apex and straight outer margin to the forewing; and the straight discal dark band on the underside of the forewing. A further recognition mark of the male is the purplish-blue tint on the upperside; and of the female the absence of scarlet in the cell of the underside of the forewing.

*Loc.*—Moreton Bay (Hewitson), Mackay (R. E. Turner), Townsville (Dodd).

This species appears to be confined to Queensland.

#### OGYRIS AMARYLLIS, Hewitson.

Cat. Lyc. Brit. Mus. p. 3, t. 1, figs. 5-6 (♀), 1862.

(Plate xiv., figs. 3-4.)

♂. Upperside dark silvery morpho-blue. *Forewing* with a linear black costal margin and a broad black outer margin, and two white costal splashes near apex. *Hindwing* with a black outer margin, narrowest at the terminations of the veins.

Underside. *Forewing* with outer marginal  $\frac{1}{4}$  grey, rest of the wing almost black; cell crossed by five white transverse bars sprinkled with blue, two basal, very small, two central and one near end of cell, beyond end of cell a short white transverse bar; the discal band is black and only well defined towards the costa, but towards the middle merges into the inner marginal half of

the wing. *Hindwing* brown, with the pattern of the markings as in the previous species, but much darker, with a very dark central blotch and a dark blotch towards outer margin.

This no doubt is what Miskin determined to be *O. orætes* (♀), as it was the only specimen at all like that sex that was in the Australian Museum when he saw the specimens. He says it agrees "pretty well" with Hewitson's figure of *O. orætes* (♀). It is a much darker blue than any except its female, and the black outer margin is much broader than in either of the males of the other species, being as broad as the outer margins of the females of *O. orætes* and *O. hewitsoni*.

♀. **U p p e r s i d e.** *Forewing* dark silvery-blue, costal margin black, narrow until the end of cell, where it broadens out to the width of the cell; apex broadly black, and outer margin very broadly black; two white splashes on costa near apex, the blue and black occupying about equal areas. *Hindwing* dark blue, with a broad black outer margin and a black line at end of cell.

**U n d e r s i d e.** *Forewing* darker than in male, but otherwise as in male, except that the areas of the cell between the first and second, and third and fourth white bars are brilliant scarlet and the white bars are more sprinkled with blue scales. *Hindwing* as in male, but much darker.

Hewitson's figure of the female of this species is excellent, and there can be no mistaking it. Miskin is also correct in his identification. In the possession of scarlet in the cell of the underside it resembles the female of *O. hewitsoni*; but then the uppersides of the two species are totally different. The recognition marks of this species are the broad black outer margins on the upperside; and on the underside the black discal band starts from near the costa, proceeds a short distance, and then is lost in the black lower half of the forewing.

This appears to be a rare species; Hewitson has recorded it from Moreton Bay, and I have taken it on the Richmond River.

## OGYRIS HEWITSONI, n.sp.

(Plate xiv., figs. 5-8.)

♂. Upperside pale silvery-blue, with very narrow black margins, widest at apex of forewing, and with two white splashes on costa near apex. *Hindwing* with a linear black outer margin.

Underside. *Forewing* grey, much darker at the end of cell, which is crossed by five white bars; in southern specimens these bars are freely sprinkled with blue scales, which are generally absent in northern specimens; a white patch beyond the cell and an irregular dark brown discal band beginning near costa and extending to the first submedian nervule, the edges of the band *very irregular*. *Hindwing* after the general pattern of *O. orætēs* (♂), but the markings are more distinct.

This is a very variable species, but I do not find any variation in the direction of either of the other species. The male is nearest to that of *O. orætēs*, but the tint of blue is lighter, the apex not so acute, and the outer margin of forewing is more convex. It is the species that Miskin\* put as the male of *O. orætēs*. Specimens bred by Mr. Dodd at Townsville do not show blue scales on the underside, and are lighter than specimens from Victoria or South Australia.

♀. Upperside. *Forewing* pale silvery-blue, with brown costal margin; apex and outer margin much wider than in the male; two white costal splashes near apex, a dark bar marking the end of cell. *Hindwing* silvery-blue, with dark brown outer margin; costa near apex broadly dark brown.

Underside. *Forewing* as in male, but with the areas of cell between first and second, and third and fourth white bars a brilliant scarlet. *Hindwing* as in male.

This was known to, and described by Miskin† as the male of *O. amaryllis*. It has the same scarlet underside in the cell as *O.*

---

\* Proc. Linn. Soc. N.S.W. 1890, v. (2), p. 25.

† Proc. Linn. Soc. N.S.W. 1890, v. (2), p. 26.



*amaryllis*, but the uppersides are different. It is also a variable species, northern forms being lighter and larger.

In Spry and Anderson's 'Victorian Butterflies' this species is figured under the name of *O. amaryllis*.

It is by far the commonest of the three species, and I have specimens from all the Australian States but Tasmania. It is in both sexes somewhat like *O. orætes* on the upperside, and like *O. amaryllis* on the underside. The recognition marks may be taken as the irregular discal band on the underside of the forewing; and the pale silvery-blue colour.

Great confusion has been caused regarding the three silvery-blue species mainly through want of sufficient material. All three species are from Queensland. *O. orætes* appears to be confined to that State. *O. amaryllis* ranges into the Northern Rivers of New South Wales; while *O. hewitsoni* is found all through Australia. Mislin's great mistake was in failing to recognise that it was only the females that had scarlet in the cell on the underside of the forewing, and thus making his *O. amaryllis* consist of the female of *O. hewitsoni* as the male, and the true *O. amaryllis* as the female. Likewise he made *O. orætes* comprise two different males. It is curious to note that the underside of the hindwing is almost the same in the three species except in the intensity of the brown colouration.

#### OGYRIS ÆNONE, n.sp.

(Plate xiv., fig. 9.)

♂. Upperside. *Forewing* with costa convex, apex acute; outer margin straight, slightly concave in the middle; inner margin straight: between costa and subcostal nervure a dark margin, grey at base, and then black to the apex, where it is widest; outer margin black, about the same width as costal margin; a prolongation of the black costal margin downwards occurs at the end of cell; a few pale blue scales are sprinkled on the black costal margin near the apex; the rest of the wing is pale silvery-blue; where the nervules approach the black outer

margin they are defined with black. *Hindwing* pale silvery-blue, with a broad black costal margin; outer margin black and linear, with well defined grey cilia; where the nervules meet the linear margin they are defined with black; anal angle of wing produced into a blunt tail. Abdominal fold well developed. The wing is longer than broad, being produced towards anal angle, and the extremities of the median nervules are marked by prolongations of the outer margin.

*Underside.* *Forewing* grey, lighter on the lower half of the wing; cell with a brown spot towards the base small and surrounded by white; a central black spot surrounded with white, which is plentifully covered with blue scales, giving a perfectly blue border to the spot when viewed directly; end of cell marked with a black bar, bordered internally with white, covered with blue scales, and externally principally with white; from this bar in an oblique direction basally to the inner margin descends a black bar wholly external to the cell, and marked off into spots by the median nervure and nervules. The discal band consists first of a series of three small brown spots surrounded by white, divided by the nervules; next two larger darker spots bordered with white, covered with a few blue scales internally; these two spots lie between the discoidals, and the lower discoidal and first median nervules; between the first and second median nervules and nearer the outer margins than the former spots lies an oval dark spot, and obliquely below this a paler spot. The general colour of the wing is almost white. There is a submarginal brown band. *Hindwing* grey, with indistinct markings somewhat after the pattern found on the underside of the hindwing of *O. orates*, Hew., but very indistinct. Along the disc between the nervules is a series of five inverted "flying bird" marks, the uppermost being furthest from the outer margin; the central portion of the outer margin is broadly marked with rich brown, as is also the anal lobe.

This magnificent species is described from a single specimen (♂) caught at Cooktown during the present year by Mr. R. E. Turner, who has kindly allowed me to describe it. In shape it is almost

identical with the male of *O. genoveva*, Hew., while the silvery-blue colour reminds one of the three preceding species, but the colour is a much paler silvery-blue, and also the anal angle is produced. The underside is much paler in colour, and the blue in the cell is more pronounced than in any of the species hitherto found. The female of this species is at present unknown.

OGYRIS IANTHIS, Waterhouse.

Proc. Linn. Soc. N.S.W. 1900, 52-54, Pl. i. figs. 1-4.

My description of this species was taken from seven specimens (♂ 6, ♀ 1), all of which had been caught on the wing. Mr. F. Brown has lately discovered larvæ and pupæ of this rare species, so that I am now enabled to give a fuller description, especially of the female.

♂. This sex shows very little variation from the original description. The margins of bred specimens are on the upperside quite black. Among themselves all the bred specimens show no variation except as to size, the average size being about 34 mm., and they vary from 30-36 mm.

♀. As mentioned in my former description the type female is slightly smaller than the average size, and I have specimens varying from 33 to 42 mm.

Upperside. *Forewing*: The central area in bred specimens is a rich yellow (much deeper than the type), and below the apex along the costa is often a variable yellow splash. The end of cell is markedly black. *Hindwing* is very variable, hardly two specimens being alike in regard to the size and position of the central orange suffusion; this may be merely absent as in the type, or may occupy quite half of the wing; sometimes it only shows in the cell, and often separate from the central spot is a splash of orange below the subcostal nervule.

Underside. *Forewing* as in type, but with the blue margins to the spots more prominent. *Hindwing* with a white line extending from the middle of costa to basal portion of abdominal

margin; and a similar semicircular white line on abdominal margin towards anal angle.

This insect is the connecting link between *O. abrota* and the silvery-blue species of the genus. The types of this species have been deposited in the Australian Museum.

---

EXPLANATION OF PLATE XIV.

- Fig. 1.—*Ogyris orates*, Hew. (♂), Townsville, Q.  
 Fig. 2.— „ „ „ (♀) „ „  
 Fig. 3.—*Ogyris amaryllis*, Hew. (♂), Richmond River, N.S.W.  
 Fig. 4.— „ „ „ (♀) „ „ „  
 Fig. 5.—*Ogyris hewitsoni*, Waterh. (♂), Townsville, Q.  
 Fig. 6.— „ „ „ (♀) „ „  
 Fig. 7.— „ „ „ (♂), Victoria,  
 Fig. 8.— „ „ „ (♀) „ „  
 Fig. 9.—*Ogyris ænone*, Waterh. (♂), Cooktown, Q.